HP Compaq 6910p Review

The 14.1" HP Compaq 6910p is one of the latest professional line portable business notebooks currently being offered by HP. The 6910p is much like the smaller 12.1" screen HP 2510p we recently reviewed in terms of looks, but of course this larger notebook packs more power. The 6910p starts at a reasonable price of $1,199 with a basic configuration that includes the Intel Core 2 Duo (Santa Rosa) processor.

The 6910p is squarely in the business notebook category, this means there is no sacrifice made when it comes to security and communications features you'd want to have as a business person. Our review model has integrated Verizon EV-DO and you can get 802.11n for faster wireless. There's a fingerprint reader for biometric security and it offers a TPM integrated security chip. The 6910p, being a business notebook, is designed so that it can share a common image with other HP notebooks if an IT department is standardizing on this brand. Furthermore, it offers Intel Centrino Pro so IT managers can remotely do such things as security updates to users machines.

HP Compaq 6910p notebook (view large image)

The configuration of our review machine is as follows:

HP Compaq 6910p specs:

CPU: Intel Core 2 Duo T7300 2.00GHz
OS: Microsoft Windows Vista Business
Hard Drive: 120 GB SATA @ 5400RPM
Screen: 14.1" WXGA Widescreen (1280 x 800) (WXGA+ option available)
Graphics: Intel GMA X3100 integrated graphics
RAM: 2.0GB DDR2 SDRAM (2 x 1GB)
Optical Drive: DVD SuperMulti drive (DVD+/-RW) w/Double Layer Support
Battery: 6-cell lithium ion, 55WHr

Wireless: Intel PRO / Wireless 802.11 a/b/g/n
Optional WWAN: Integrated HP ev2200 1xEV-DO Wireless Module
Security: Fingerprint reader, TPM hardware-based encryption
Weight: 5.2 lbs
Dimensions: 13" (Width) x 9.4" (Depth) x 1.1" (Height)
Ports/Slots: docking connector; 1 IEEE 1394 (FireWire); 3 Universal Serial Bus (USB 2.0); VGA monitor out; S-video out; RJ-45 Ethernet LAN; RJ-11 modem; Type I/II PC Card Slot; SmartCard; SD card reader; headphone/speaker jack; microphone
Warranty: 3 year parts and labor

Looks

The 6910p is all business in its looks using only dark gray and black colors. It's a clean and boxy look. To keep the look clean HP even goes so far as to make the media buttons touch sensitive instead of regular push button style. While the touch sensitive buttons look nice and the lights on them are pretty, I personally prefer the protruding buttons as it's generally more user friendly to be able to "feel" a button. Thankfully the touch sensitive buttons do not beep loudly when touched like the old HP dv6000 series did, that wouldn't go over well in a business environment.

Touch sensitive buttons (view large image)

Design and Build

The overall build quality of the HP 6910p is very good. A latch is used to hold the screen down when stowed, I really like the rubber gripped latch opener because it's easy to feel and find without looking down at the notebook and easy to operate. There's no fiddling to open the screen. The screen has rubber stoppers around it to prevent the screen from slamming into the keyboard when you close it.

The lid of the notebook is constructed of a firm mag-alloy material and will endure the bumps of the road. When the back of the lid is pushed on no screen ripples appear, indicating that the protection is quite adequate. The same mag alloy material is used on the palm rests area which makes sure this area is sturdy and doesn't sink under the weight of your hands. The keyboard is also firm with absolutely no mushiness or sink to it.

One knock is that HP included a plastic dummy insert for the the PCMCIA slot, a flap is preferable as those inserts are tricky and tend to get lost eventually.

HP 6910p above view with lid closed (view large image)

The hard drive is shock mounted for protection and also has an accelerometer built-in. The HP 3D DriveGuard software uses the accelerometer to track for sudden movements or detect an abnormal orientation -- such as when the notebook is being carried. If the 3D DriveGuard software detects such movements it will park the hard drive read/write head so as to protect data stored on the platter. The entire bottom of the laptop is as sturdy as the lid with little flex to it, so your protection there should be good.

HP Compaq 6910p bottom view (view large image)

Input and Output Ports

The HP Compaq 6910p offers a standard array of ports for a business notebook. FireWire, S-Video and 3 USB ports are all part of the mix. Here's a tour around the HP Compaq 6910p to see what ports you get:

HP Compaq 6910p front side (view large image)

On the front we have: Wireless light, power light, battery light, drive light / HP 3D DriveGuard light, integrated stereo speakers, display release latch and SD card reader below the latch.

HP Compaq 6910p left view (view large image)

On the left side we have: Type I/II PC card slot, power connector, 2 USB 2.0 ports, stereo headphone / line out, stereo microphone / line in, FireWire 1394a port, vent

HP Compaq 6910p right side view (view large image)

On the right side we have: 1 USB 2.0 port, Optical Drive, RJ-45 Ethernet jack, RJ-11 / modem jack

(view large image)

On the back side we have: Power jack, S-Video jack, VGA out, Kensington slot lock

The screen

(view large image)

This review notebook has a 14.1" WXGA (1280 x 800) matte screen. The screen brightness is good, it's certainly not the brightest screen out there and not on par with a Sony or Fujitsu screen, but it's adequate. There are no complaints to be had regarding light leakage, the screen is evenly lit. As usual with notebook screens, the vertical viewing angles are not so great while the horizontal viewing angles are decent. Worth a mention is that HP includes an ambient light sensor

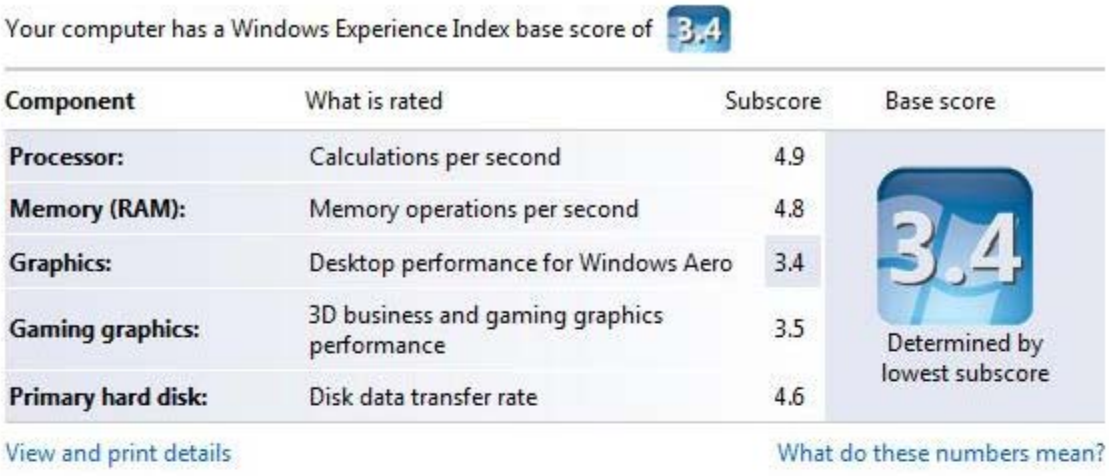
There is no option for an LED backlit screen like you can get on the smaller 12.1" screen HP Compaq 2510p.

Sound

The sound was very good on the 6910p, it has some of the best speakers I've heard on a business notebook. The audio is crisp and the speakers can get very loud at top volume settings. The two speakers are located on the front right side below the palm rests area, the fact they face forward makes audio project well. The speakers are good enough that I wouldn't bother with a set of external speakers in a meeting or for on the road, you'll get plenty of volume and clarity just using the built-in speakers. For those times you don't want to disturb others with audio, there's a headphone jack well positioned on the left side towards the front -- there's a headphone icon on the palm rest above the port to make it easy to find that.

Performance and Benchmarks

With the Intel Santa Rosa Core 2 Duo processor platform on board you can rest assured performance will be at the top of the curve for notebooks. With our review unit we got an Intel T7300 2.00GHz processor, which is certainly adequate for a business notebook. With 2 GB of RAM on board there were no issues running Windows Vista Business and you won't get any lag when multi-tasking. You get the option of choosing between ATI Radeon X2300 graphics or Intel X3100 integrated graphics, the integrated option being cheaper but not quite as good in terms of performance. Our review unit came with the Intel integrated, which will generally be fine for most business users. The Windows Vista Index score for the 6910p was decent, the lowest score was a 3.4 for graphics (which isn't awful) and the processor scored well at 4.9



Super PI is a program that forces the processor to calculate Pi to 2 million digits of accuracy, below you can see how the T7300 performed:

Notebook	Super Pi to 2 Million Digits Time
HP Compaq 6910p (2.0GHz Intel Core 2 Duo T7300)	**1m 00s**
HP Compaq 6510b (2.20GHz Intel Core 2 Duo T7500)	55s
HP Compaq 6515b (1.6GHz AMD Turion 64 X2 TL-52)	2m 05s
HP dv6000t (2.16 GHz Intel T2400)	59s
Dell Inspiron e1705 (2.0GHz Core 2 Duo)	1m 02s
Lenovo ThinkPad T60 (2.0GHz Core Duo)	1m 18s
Toshiba A100 (2.0GHz Core Duo)	1m 18s
Samsung X60 (1.66GHz Core Duo)	1m 29s
Sony VAIO FS680 (1.86GHz Pentium M)	1m 53s
IBM ThinkPad T43 (1.86GHz Pentium M)	1m 45s
HP dv5000z (2.0GHz Sempron 3300+)	2m 02s

wPrime is a program that forces the processor to do recursive mathematical calculations, the advantage of this program is that it is multi-threaded and can use both processor cores at once, thereby giving more accurate benchmarking measurements than Super Pi.

Notebook / CPU	wPrime 32M time

HP Compaq 6910p (Core 2 Duo T7300 @ 2GHz)	**40.965s**
Sony VAIO TZ (Core 2 Duo U7600 @ 1.20GHz)	76.240s
Zepto 6024W (Core 2 Duo T7300 @ 2GHz)	42.385s
Lenovo T61 (Core 2 Duo T7500 @ 2.2GHz)	37.705s
Alienware M5750 (Core 2 Duo T7600 @ 2.33GHz)	38.327s
Hewlett Packard DV6000z (Turion X2 TL-60 @ 2.0GHz)	38.720s
Samsung Q70 (Core 2 Duo T7300 @ 2.0GHz)	42.218s
Acer Travelmate 8204WLMi (Core Duo T2500 @ 2.0GHz)	42.947s
Samsung X60*plus* (Core 2 Duo T7200 @ 2.0GHz)	44.922s
Zepto Znote 6224W (Core 2 Duo T7300 @ 2.0GHz)	45.788s
Samsung Q35 (Core 2 Duo T5600 @ 1.83GHz)	46.274s
Samsung R20 (Core Duo T2250 @ 1.73GHz)	47.563s
Dell Inspiron 2650 (Pentium 4 Mobile 1.6GHz)	231.714s

The 3DMark05 synthetic graphics benchmark results for the 6910p with its X3100 integrated graphics interestingly beat out the AMD/ATI based graphics Compaq 6515b -- though only by a hair.

Notebook	**3D Mark 05 Results**
HP Compaq 6910p (2.00GHz Intel Core 2 Duo T7500, Intel X3100)	**904 3DMarks**
HP Compaq 6515b (1.6GHz AMD Turion 64 X2 TL-52, ATI x1270)	871 3DMarks
HP Compaq 6910p (2.20GHz intel Core 2 Duo T7500, ATI X2300 128MB)	2,421 3DMarks
HP dv6000t (2.16 GHz Intel T7400, NVIDA GeForce Go 7400)	2,013 3D Marks
Dell Inspiron e1705 (2.0GHz Core Duo, ATI X1400)	1,791 3D Marks
Acer TravelMate 8204WLMi (2.0GHz Core Duo, ATI X1600 256MB)	4,236 3DMarks
Alienware Aurora M-7700(AMD Dual Core FX-60, ATI X1600 256MB)	7,078 3D Marks
Lenovo ThinkPad T60 (2.0GHz Core Duo, ATI X1400 128MB)	2,092 3D Marks

Asus V6Va (2.13 GHz Pentium M, ATI x700 128 MB)	2,530 3D Marks
Fujitsu n6410 (1.66 GHz Core Duo, ATI X1400 128MB)	2,273 3DMarks
Dell XPS M1210 (2.16 GHz Core Duo, nVidia Go 7400 256MB)	2,090 3D Marks

PCMark05 measures the overall system performance of a notebook, the 6910p came out with a respectable score, though nothing spectacular:

Notebook	**PCMark05 Score**
HP Compaq 6910p (2.0GHz Intel Core 2 Duo T7300, Intel X3100)	**3,892 PCMarks**
HP Compaq 6510b (2.20GHz Intel Core 2 Duo T7500, Intel X3100)	4,241 PCMarks
HP Compaq 6910p (2.20GHz intel Core 2 Duo T7500, ATI X2300 128MB)	4,394 PCMarks
HP Compaq 6515b (1.6GHz AMD Turion 64 X2 TL-52, ATI x1270)	2,420 PCMarks
Toshiba Satellite A135 (Core Duo T2250, Intel GMA 950)	3,027 PCMarks
HP dv6000t (2.16 GHz Intel T7400, NVIDA GeForce Go 7400)	4,234 PCMarks
Fujitsu LifeBook A6010 (1.66GHz Core 2 Duo, Intel GMA 950)	2,994 PCMarks
Alienware M7700 (AMD Athlon FX-60, Nvidia Go 7800GTX)	5,597 PCMarks
Sony Vaio SZ-110B in Speed Mode (Using Nvidia GeForce Go 7400)	3,637 PCMarks
Toshiba Tecra M6 (1.66GHz Intel T2300E, Intel GMA 950)	2,732 PCMarks
Asus V6J (1.86GHz Core Duo T2400, Nvidia Go 7400)	3,646 PCMarks
Sony VAIO FE590 (1.83GHz Core Duo)	3,427 PCMarks

Notice another 6910p a member of our forums had with a 2.20GHz processor and ATI X2300 128MB graphics scored quite a bit higher in both PCMark05 and 3DMark05.

For a complete readout of the components inside the 6910p we have see the following report: Everest benchmark

Keyboard and Touchpad

(view large image)

The keyboard is as good as the overall build quality of the 6910p. There was no flex in the keyboard, the layout was free of any annoying quirks, and responsiveness was good. The keys have a good amount of travel, and are not too stiff. A nice added touch is that the keys have a special coating called DuraKeys that HP claims will prevent letters from wearing off after extensive use -- something that's a problem on just about every notebook I've ever used.

The touchpad has rubberized buttons with good tactile feedback and a nice large size so they're easy to feel. The touchpad area is generously sized, it's responsive despite the fact it has a slick surface -- some people prefer a rougher textured touchpad. There is a scroll area on the right side of the touchpad that allows you to easily scroll up and down through web pages.

I personally prefer using the including pointing stick navigation, this is a blue nub in the middle of the keyboard that allows you to navigtate the cursor around the screen without having to move your hand down to the touchpad area. Many business users are used to having this input mechanism, so it's important to have and in my opinion much faster than using a touchpad once you're trained on it.

Off to the right you'll see there's a fingerprint reader for biometric security. This has become almost a standard in business notebooks these days, and is nice to have. If you don't use biometric security and prefer to use a strong typed password as login, you can disable the reader.

Battery Life

The default provided battery for the 6910p is a 6-cell 55WHr battery that performed reasonably well. With wi-fi on, screen at half brightness and in 'Balanced mode' the battery gave 3 hours and 37 minutes of life. Half of that time the notebook idled and the other half it was used for light office work. You can expect somewhere between 2 and 2.5 hours if you're playing a movie with screen at full brightness, while if you're doing light work with screen brightness down you could probably get over 4 hours of battery life.

Heat and Noise

The 6910p is fairly quiet overall, the only time I really heard any noise generated from it was when running benchmarks such as PCMark05 and 3DMark05 -- in other words, applications that really

make the notebook work hard. The fan did get a bit loud during these times of intense usage, but under normal conditions you won't have any issues with too much heat or noise. I installed Notebook Hardware Control and according to its measures the CPU temperature remained at about 50C when idling. There were no hot spots on the notebook, you could easily use it in your lap comfortably and the palm rests won't make you sweat.

Wireless

The HP 6910p included the latest Intel 802.11n capable wireless chipset, the Intel 4965agn. While I didn't test the wireless with an 802.11n router, the wireless range and throughput was very good using an 802.11g router we have in our office. Wireless on/off power is managed using HP's Wireless Assistant software, or you can simply tap on the touch sensitive wireless on/off switch at the top of the keyboard. The touch sensitive button is a little finicky and I would have preferred a "real" button, even if such a thing doesn't look as fancy.

In addition to the Wi-Fi built-in HP has included a built-in HP WWAN card that works with Verizon's network. Specifically the 6910p uses an integrated HP ev2200 1xEV-DO Wireless Module. Reception and connecting was good using this card, I have a Verizon Wireless card modem for my everyday notebook and in the same room as the 6910p the HP notebook was getting better reception and throughput. This indicates the reception antennas have been well placed on the 6910p.

Software

(view large image)

Outside of the ubiquitous Norton anti-virus software you get on any HP notebook, there was nothing I would describe as bloatware installed. There were a number of useful business-oriented utilities, primarily for handling security. Windows Vista Business did not present any surprises and worked without a hitch. HP still offers Windows XP Pro on this machine, which many businesses still use and probably will continue to do so for some time.

The Compaq 6910p had 81 processes running after bootup, the more bloatware you have installed and processes you have to start the slower bootup usually is, and then in turn the system might be slower overall.

Notebook	Processes on first startup
HP Compaq 6910p	81

Lenovo ThinkPad T61p	90
Lenovo ThinkPad T61	80
HP Compaq 2510p	77
LG R500	55
Dell Vostro 1500	55

Conclusion

The HP Compaq 6910p offers a nice blend of portability with performance at a reasonable price. The build quality is very good and the look is clean and stylish, but it won't win any awards. The build quality, 3-year warranty and excellent security features will suit a business buyer well. I wish the 6910p were more configurable via the HP.com site, like the Dell D630 and Lenovo ThinkPad T61 are on those company's sites, but at least there's a wide range of 6910p configurations available from various e-tailers.

Overall it can be said that with the Compaq 6910p, HP has designed a well rounded 14.1" screen portable business notebook that leaves little to complain about and many things to like.

Pros:

Solid build, light enough to easily carry, pleasing design though nothing flashy
Excellent wireless connectivity options
Great performance with Intel Santa Rosa platform
Reasonable price
Generous 3-year warranty

Cons:

Can't configure online to your precise liking
Plastic insert instead of a flap for PC card slot
Touch sensitive buttons are not very responsive
No good dedicated graphics options available to support DX10